Generic Assessment Endpoints for Ecological Risk Assessments

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Respondents to a survey by the U.S. EPA's Risk Assessment Forum (RAF) indicated a need for additional guidance for the identification of ecological assessment endpoints. Assessors and managers are unsure what endpoints are appropriate, and researchers do not know what ecological properties their tests and models should estimate. To meet this need, a RAF technical panel has developed a set of generic ecological assessment endpoints (GEAEs) to serve as a starting point for consideration during the planning and problem formulation stages of ecological risk assessments. Criteria used for selecting the GEAEs were that they must be useful in the EPA's decision-making process, practical, and well defined. Utility was based on policy support including citation in statutes, treaties, regulations, or agency guidance and on precedents. Practicality was based on the availability of methods to measure or estimate the attributes. Good definitions included both a class of entities and associated attributes that could be readily understood by assessors and decision makers. The GEAEs include the organism, population, and community/ecosystem levels of organization. An example is abundance of an assessment population. Implementation of this GEAE in a particular assessment would require defining the species, the abundance metric (e.g., numbers of all life stages), and the spatial extent of the assessment population. The GEAEs are not exhaustive or mandatory, but are provided to assist EPA programs, researchers, and decision makers, as well as ecological risk assessors outside the Agency.